

**AMENDMENTS TO THE ABSTRACT:**

Please amend the Abstract as follows:

~~In an~~ An adaptive equalizer ~~circuit, to processing~~ an input having a fluctuating amplitude[[,]] realizes a stable adaptive equalization operation ~~can be realized~~ without changing over a reference value for computing an equalization error. An input signal is held as a sample with a timing signal shifted from a reference clock of the input signal by a phase of 1/2 cycle. An equalization output is compute from ~~an obtained~~ sample data. The difference between only the first output value after a zero-crossing and an arbitrary ~~set~~ reference value is computed, and the computed value is set as an equalization error. A coefficient of the adaptive equalization circuit is updated from the equalization error and the sample data. ~~Further, to the~~ To stabilize for displacement of ~~the~~ symmetry of the input ~~signal~~, the reference value of the ~~adaptive~~ equalizer ~~circuit~~ is changed corresponding to the change of a ~~binarization~~ digitization threshold value of a ~~binarization~~ digitization circuit which constitutes a rear stage of the adaptive equalizer ~~circuit~~.